The Earliest Described Hawaiian Insects.

BY O. H. SWEZEY

(Presented at the meeting of Feb. 2, 1928)

In the December, 1927, issue of the Entomological News is a paper by S. A. Rohwer on The Earlier Described Insects in America. It aroused my interest in endeavoring to ascertain what were the first native Hawaiian insects to be named and described. So far as I have been able to ascertain, the wasp known as *Odynerus radula* (Fabr.) was the first Hawaiian insect named and described (Fauna Hawaiiensis, I, Pt. I, p. 71, 1899).

This wasp was in the Banks' collection and described by Fabricius as *Vespa radula* in Mant. Insect., I, p. 290, n. 44, 1787. A description is also given by him in Entomologia Systematica, II, p. 269, n. 58, 1793. The habitat is given as Sandwich Islands. As this is one of the commonest Kauai wasps and does not occur on any other island, and as this description is only a few years later than the landing of Captain James Cook at Waimea, Kauai, Jan. 21, 1778, it seems very likely that it was collected by some one of Captain Cook's party. This seems all the more probable when we read in Captain Cook's account that several days were spent at anchor, probably near the mouth of what is now known as Waimea River, and on one of the days he and Messrs. Anderson and Webber took a walk up the valley, where they visited a burial place which he describes. He also describes many other things, as the people themselves, the soil, the rocks, the plants, etc. Giving such close attention to everything thus, it would be expected that some of the insects would have been noticed and collected, which is more than likely just what happened and the specimens somehow eventually were placed in the Banks' collection.

Sir Joseph Banks accompanied Captain James Cook on his first voyage in the Pacific, 1768-71. This was in the South Pacific, where they visited Tahiti, New Zealand, Australia and the Dutch East Indies. The most of Banks' insect collecting was done while the ship "Endeavor" was stranded and laid up for repairs for four months in 1770, at Endeavor River, where Cooktown, New

Zealand, now stands. Sir Joseph Banks was not with Captain Cook on the voyage when he discovered the Hawaiian Islands, and landed at Waimea, Kauai, as before mentioned, but one can readily infer that his presence on a previous voyage and collecting insects would have aroused sufficient interest in insects so that any that might have been taken on a subsequent voyage would have been turned over to him.

One other insect described by Fabricius from the Banks' collection undoubtedly was collected at the same time and place and reached the Banks' collection in the same manner. I refer to what is now known as *Echthromorpha fuscator* (Fabr.), a black ichneumonid which is common throughout the Hawaiian Islands from the coast to the mountain tops. It was described by Fabricius as *Ichneumon fuscator* in Entomologia Systematica, II, p. 163, n. 123, 1793, from the Banks' collection, "Habitat in Insulis Sandwichii." In a later publication, he refers to it as *Cryptus fuscator* (Syst. Piezata, p. 85, n. 59, 1804). In the Fauna Hawaiiensis, I, Pt. III, p. 336, 1901, it is listed as *Echthromorpha maculipennis* Holmgren, described by him in Eugenies Resa, Insekter, p. 406, n. 33, 1868.

In Proceedings Hawaiian Entomological Society, II, No. 5, p. 192, 1913, Dr. Perkins calls attention to a paper by Morley in The Entomologist, 1909, pp. 131-36, "On the Ichneumonidae of the Banksian collection in the British Museum," in which *Cryptus fuscator* Fabr. is referred to, and which Dr. Perkins considers the same insect as *Echthromorpha maculipennis* Holmgren.

This is a very important insect in the control of Lepidoptera in the Hawaiian Islands. With its rigid ovipositor it oviposits into the host pupa, oftentimes where enclosed within cocoon or spun together leaves. A common host is the suspended chrysalis of the Kamehameha butterfly, *Vanessa tammeamea* Esch. Collectors who have been so fortunate as to find a number of these chrysalids and have anticipated obtaining a goodly number of the butterfly, have always been disappointed, for always more of the parasite would issue than of the buterfly. Other hosts from which it has been reared are: *Vanessa cardui* (L.), *Lycaena boetica* L., *Plusia chalcites* Esp., *Omiodes blackburni* (Butl.), *Omiodes accepta* (Butl.), *Euhyposmocoma trivitella* Sw., *Amorbia emigratella*

Busck, *Archips postvittanus* (Walker) and *Capua reynoldsiana* Swezey. The larva pupates within the host chrysalis without making a cocoon. The adult issues from the anterior end by breaking a somewhat ragged hole.

Status of Sugar Cane Pests in Hawaii in the Year 1927

BY O. H. SWEZEY

(Presented at the meeting of March 1, 1928)

Leafhopper, Perkinsiella saccharicida Kirk.

No infestations of any importance came to our attention during the year. Most everywhere in the cane fields only an occasional leafhopper was to be found. In a few instances they became noticeably numerous but not abundant enough to be injurious. Their enemies soon increased so as to have the pest again reduced to scarcity. The chief enemies were *Paranagrus optabilis* and *Ootetrastichus beatus,* introduced egg-parasites, and *Cyrtorhinus mundulus,* the small bug which sucks the eggs, introduced from Australia.

Cane Borer, Rhabdocnemis obscura (Boisd.).

The borer has been in the usual satisfactory control by the N. Guinea Tachinid (*Ceromasia sphenophori* Vill.), except in a number of instances where mature cane has stood for a long time before harvesting, and the borers were working on the cane that was buried beneath an accumulation of dead leaves or trash, so that the infested canes were not accessible to the parasites. A considerable amount of loss has resulted thus. On one plantation the loss was estimated at $200,000.00.

Leafroller, Omiodes accepta (Butl.).

No outbreak. Hardly any noticeable injury by this pest for a number of years.

Armyworms, Cirphis unipuncta (Haw.) and **Spodoptera mauritia** (Boisd.).

Quite satisfactorily controlled now in most places since the introduction of the parasites from Mexico in 1923. There are now at least eight valuable introduced parasites working on armyworms.
